Paper No. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte DINEI A. FLORENCIO

Appeal No. 2002-1309
Application No. 09/286,760

ON BRIEF

Before JERRY SMITH, DIXON, and LEVY, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-21, which constitute all the claims in the application.

The disclosed invention pertains to a method and apparatus for converting the bitrate of an encoded image sequence having a plurality of frames without having to execute a full re-encoding process, that is, without having to first decode the encoded image sequence and then re-encoding the decoded images at the new desired bitrate.

Representative claim 1 is reproduced as follows:

1. A method for changing a first bitrate of an encoded image sequence having a plurality of frames, said method comprising the steps of:

a) requantizing a block of transform coefficients within a current frame of said encoded image sequence using a new quantizer scale to generate a block of requantized transform coefficients;

b) encoding said block of requantized transform coefficients into an encoded image sequence having a second bitrate; and

c) storing a requantization error associated with said requantization of said block of transform coefficients for propagating said requantization error, if said current frame is used as a reference frame.

The examiner relies on the following reference:

Singhal et al. (Singhal) 5,333,012 July 26, 1994

Claims 1-21 stand rejected under 35 U.S.C. § 103(a). As evidence of obviousness the examiner offers Singhal taken alone.

Rather than repeat the arguments of appellant or the examiner, we make reference to the brief and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the brief along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1-21. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered and are deemed to be waived by appellant [see 37 CFR § 1.192(a)].

The examiner has indicated how he finds the claimed invention to be obvious over the teachings of Singhal. The examiner asserts that although Singhal does not use the term "requantization error," the examiner finds that the variance processor 8 of Singhal is equivalent. The examiner asserts that it would have been obvious to the artisan to recognize that Singhal discloses an element which performs the claimed functions [answer, pages 3-4].

With respect to independent claims 1, 8 and 15, appellant disputes the examiner's position that Singhal teaches the claimed method and apparatus. Appellant argues that Singhal fails to show a single element of the invention. More particularly, appellant argues that there is only a single quantization disclosed in Singhal, and therefore, there can be no requantization error propagated in Singhal. Appellant also argues that the variance disclosed in Singhal relates to the texture of a segment of the frame, and has nothing to do with a requantization error. Appellant argues that the examiner has misinterpreted the variances of Singhal based on a more generic definition from the dictionary [brief, pages 7-13].

The examiner responds by asserting that the variances in Singhal are used to determine the distortion level and that the adjusting of the quantization step size in Singhal is directly related to adjusting the distortion level. The examiner also asserts that because Singhal uses a recursive methodology on the quantization, a requantization takes place. Finally, the examiner responds that the term variances in Singhal should be interpreted broadly [answer, pages 4-9].

We will not sustain the examiner's rejection of independent claims 1, 8 and 15. Although we agree with the examiner that the recursive process in Singhal can be considered

to carry out a requantization of a block of transform coefficients within a current frame of encoded images as claimed, we do not agree with the examiner that the variances of Singhal constitute a requantization error which is propagated when the current frame is used as a reference frame as claimed. The examiner's use of a dictionary to define the variances of Singhal is misplaced. It is the terms of the claims which are interpreted broadly. Terms in a prior art reference must be interpreted in the manner disclosed in the reference. As argued by appellant, the variances in Singhal are defined therein as relating to the texture of the image. They have nothing to do with a requantization error which is to be propagated if the current frame is used as a reference frame. We are unable to find any support within the confines of the Singhal reference to support the examiner's contention that the variances of Singhal are equivalent to the requantization error as recited in appellant's claims on appeal. Therefore, the examiner's findings of obviousness are based on an erroneous interpretation of the teachings of Singhal.

Since the teachings of Singhal do not render any of the independent claims obvious, they also fail to teach the obviousness of any of the dependent claims as well. Accordingly, the decision of the examiner rejecting claims 1-21 is reversed.

REVERSED

Jerry Smith Administrative Patent Judge	)	
Joseph L. Dixon Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
Stuart S. Levy Administrative Patent Judge	)	

JS/eld

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